

REMARKS

Applicant respectfully requests reconsideration of the Examiner's rejection of claims 9-16 as being unpatentable over Chang in view of Smith and further in view of Beshai.

Main claim 9 of the present invention comprises the following limitations: "... *a communications network comprising network nodes and network links between the network nodes; and a network management system for allocating connections to the network, the connections utilizing the network nodes and network links; ...*". This claim makes it clear that the links connect the network nodes, and then there are connections through the links and nodes. The connections are allocated by the network management system.

A person skilled in the art would interpret this as a *circuit* switched network, i.e., a network in which a connection (or a circuit) is set-up between nodes as if the nodes were physically connected. Once a connection like this is established between points A and B, all data (or voice) in one session is transferred between the points A and B via the same connection (circuit), i.e., all the data go along the same way from the points A to B, and all experience the same delay.

Chang et al. relied upon by the Examiner disclose a *packet* switched network. In a packet switched network, data traffic is split into chunks of data, (i.e., packets), which are then routed over the network. Each packet comprises a header with its destination. For a data transmission from the points A to B, the packets are routed independently and, in consequence, two packets, both going from the points A to B may go to their destination via different routes. In each network node, the packets are queued or buffered, resulting in a variable delay and throughput, depending on the traffic load in the network.

The abstract of Chang makes it clear that Chang's invention is about routing packets and solving problems clearly related to packet switched networks (see the first sentence of the abstract). The packet switched nature of Chang's disclosure is further apparent, for example, from the background section (paragraph 0005), and the description of embodiments (paragraphs 0166, 0184). Paragraphs 0166, 0184 disclose particular solutions to the problem of header replacement, which is, according to Chang, an important problem of high-throughput operation in a packet switched network.

Paragraph 106 of Chang's disclosure discloses augmenting conventional circuit-switched WDM with plug-and-play modules to provide packet switching capabilities. Based on the further description, the solution of Chang requires these packet switching capabilities.

Paragraph 0113 of Chang's disclosure explains that the NC&M 220 implements the routing protocol by disseminating routing tables to each network element 121-125 to have packet routing decisions at each network element. The consequence of this is that the packets are routed individually at each node, and that there are no connections established by the network management system between the nodes in order to deliver the packets.

Further, paragraph 0119 of Chang's disclosure explains that the role of the NC&M 220 is determining the routing information in the form of global routing tables and downloading these global routing tables to each of the elements. NC&M also may determine that there is a need for a fiber optic link between a node in New York City and a node in Los Angeles, and then the link is composed (see lines 10-13 of paragraph 0113). It has to be noted that the fiber optic link is a physical entity between the nodes, and this is *not* a connection in the sense of claim 9.

Claim 9 of the present invention makes it clear that a connection utilizes network nodes and network links, where the links are between the network nodes. This means that a link and a connection are two different things. Chang discloses a network management system for establishing links, but *fails* to disclose a network management system for allocating connections, which is required by claim 9.

In consequence, it is respectfully submitted that there are more distinguishing features between claim 9 of the present invention and Chang than those suggested by the Examiner. These differences make claim 9 novel.

For example, as for the distinguishing feature identified by the Examiner (“network management system storing information on network which current connections are reconfigurable and which are not”), the Examiner makes reference to paragraph 0079 of Smith, namely: “the first link between node A and the first intermediate node along the path is fixed”. It has to be noted, however, that claim 9 regarding this feature refers to *connections* (a connection utilizes network nodes and network links, where links are between the network nodes), whereas Smith refers to *links*.

A link in Smith is *not* the same as a connection is in claim 9. See paragraph 0034 of Smith, namely: “To summarize, network 1 comprises bidirectional fiber links 10, connecting a plurality of nodes which are nodes A, B, C, D, E, F, Z in the example of Fig. 1.” Again, a link is a physical entity between nodes, and is not a connection in the sense of claim 9. The consequence of that is that Smith *fails* to disclose a “network management system for storing information as to which current network connections are reconfigurable and which are not”.

As explained above, and admitted by the Examiner, none of the prior art references relied upon by the Examiner discloses all of the limitations of claim 9.

The Examiner is of the opinion that by combining the teachings of Chang, Smith and Beshai a person skilled in the art would arrive at the invention as defined in claim 9. The applicant respectfully does not agree with that. The analysis given above shows that there are more differences between claim 9 and Chang, and that Smith does not show what is stated by the Examiner. This means that the combination of the teachings of these three references would fail to incorporate these features. Moreover, if these three prior references were combined, then, in addition to the differences mentioned above, the resulting solution will be a packet switched network, and not a circuit switched network as in claim 9. A packet switched network for a person skilled in the art is clearly different from a circuit switched network.

In keeping with the duty of candor, the accompanying PTO Form 1449A lists additional references. A copy of each reference is attached to said form. The Rule 17(p) fee of \$180.00 is submitted herewith. Consideration and entry of the listed references are respectfully requested.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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